

Appendix C

Conceptual Alternative Screening



EXIT 3

Conceptual Alternative Screening

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NEW YORK STATE
DEPARTMENT OF TRANSPORTATION



FEDERAL
HIGHWAY ADMINISTRATION

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About This Document

This document was created as a decision-making tool for the NYS Department of Transportation and to serve as a mechanism for obtaining input from the Project Advisory Committee. It is intended to display the wide array of alternatives under consideration and how they measure up to the Project Objectives. On the following pages you will find a listing of Project Objectives, Level 1 Measures of Effectiveness, Level 2 Measures of Effectiveness, and Other Considerations. These components were arrived at after numerous meetings between the Department, its consultant Clough, Harbour and Associates LLP, the Federal Highway Administration, and the Capital District Transportation Committee.

The Measures of Effectiveness (MOEs) are used to evaluate the relative benefits of each primary project objective. Over 50 alternatives were originally screened using the Level 1 MOEs. Many of these original alternatives failed several of the MOEs and have been eliminated from further consideration. The alternatives in this document have either passed the Level 1 MOE test (Part 1 of the document) or were close enough to passing to merit bringing them to your attention (Part 2 of the document).

You will notice that each alternative is associated with a letter between A-E. Each letter represents a “grouping” of alternatives that share access improvements to a common destination or in a common area. The explanations of each alternative grouping are listed on page 5 after the project objectives/measures of effectiveness.

At the back of the document, you will find the Conceptual Alternative Screening Document Summary Table and Access Matrix. The Summary lists each alternative, how the alternative fared against the Level 1 MOEs, its approximate cost, and remarks. The Access Matrix is another tool that allows, at a glance, the relative effect each alternative has on access from one point to another within the Project Study Area (PSA). It is our hope that through Project Advisory Committee input the number of alternatives selected for further consideration can be reduced to a manageable number (i.e. 5).

It is important to note that some of the Alternatives in Part 2, while not technically passing the Level 1 MOE test, may have enough merit to warrant further study. Some of the alternatives in Part 1, which have all passed the Level 1 MOE test, may provide similar benefits as other alternatives in Part 1, but their relative cost and/or associated impacts render them irrelevant. Therefore, alternatives selected for further consideration do not need to be limited to those found in Part 1.

Evaluation Criteria

PROJECT OBJECTIVES

The proposed project is a significant long-term capital investment linking two major transportation facilities of the Capital District: I-87 and the Albany International Airport. As such, the following Primary Project Objectives and the associated “Measures of Effectiveness” and “Other Considerations” have been developed by the Department, the Federal Highway Administration, and the Capital District Transportation Committee to recognize the overall goal of improving mobility and economic development for the Capital District:

- Improve access between I-87 and the Albany International Airport without precluding future, long-term I-87 mainline improvements, and without impacting I-87 mainline operations between Exit 2 and Exit 5.

- Improve access between I-87 and Wolf Road without precluding future, long-term I-87 mainline improvements, and without impacting I-87 mainline operations between Exit 2 and Exit 5.
- Improve operations and safety in the existing Exit 4 area.

In addition to the primary project objectives, the following secondary objective will be considered during the evaluation of design alternatives:

- Improve system connectivity between the existing pedestrian/bicycle facilities on Wolf Road and the facilities constructed as part of the Albany/Watervliet-Shaker Road project.

MEASURES OF EFFECTIVENESS AND OTHER CONSIDERATIONS

The following measures of effectiveness (MOEs), listed in no particular order, are a means to evaluate the relative benefits of each primary project objective. Conceptual-level alternatives

have been screened using the Level 1 MOEs. The alternatives selected for further consideration following the Level 1 screening will be further evaluated at a later date using the Level 2 MOEs.

Level 1 MOEs

MOE L1-1 The effectiveness of access improvements between I-87 and the Albany International Airport will be measured by the number of left turns through an at-grade, signalized intersection that a vehicle must make when traveling from I-87 northbound to the Airport. This assumes that a significant amount of delay is experienced by a vehicle making a left turn across on-coming traffic. Since the existing conditions require vehicles to make two left turns from I-87 northbound to the Airport, alternatives that require one left turn or less to make this move will be considered to have improved access.

MOE L1-2 The effectiveness of access improvements between I-87 and Wolf Road will be measured by the number of left turns through an at-grade, signalized intersection

that a vehicle must make when traveling from I-87 southbound to Wolf Road. Since the existing conditions require vehicles to make two left turns from I-87 southbound to Wolf Road, alternatives that require one left turn or less to make this move will be considered to have improved access.

MOE L1-3 The effectiveness of access improvements will also be measured by whether an alternative allows for all connections in the vicinity of those that are currently provided by Exits 4 and 5. For purposes of this measure, a distance of ¼ mile (400 m) will be considered as a threshold distance.

MOE L1-4 The long-term practicality of access improvements on I-87 will be measured by whether the alternative provides a sufficient median width, 35.5 ft (10.8 m), to allow for future mainline expansion.

Level 2 MOEs

MOE L2-1 The effectiveness of access improvements between I-87 and the Albany International Airport will be measured by reductions in travel times and vehicle hours of delay from the most-direct existing connection between I-87 northbound/southbound and the Albany International Airport and the most-direct proposed connection between I-87 northbound/southbound and the Albany International Airport in the 2008 design year.

MOE L2-2 The effectiveness of access improvements between I-87 and Wolf Road will be measured by reductions in travel times and reductions in vehicle hours of delay in the 2008 design year.

MOE L2-3 Impacts to the operations on the I-87 mainline will be measured by the number of hours per day during which the

mainline operates at a level of service “D” or worse during the 2008 design year.

MOE L2-4 Improvements to operations in the Exit 4 area will be measured by the number of vehicle miles traveled (VMTs) within the PSA in the 2008 design year.

MOE L2-5 Improvements to operations and safety within the Exit 4 area will be measured through improvement in level of service, reductions in vehicle hours of delay, and reductions in accident rates in the 2008 design year at the following locations:

- Exit 4 Southbound Exit-Ramp
- Exit 4 Southbound Exit-Ramp/Old Wolf Road Intersection
- Albany-Shaker Road/Old Wolf Road Intersection
- Albany-Shaker Road/Wolf Road Intersection
- Exit 4 Northbound Exit-Ramp/Wolf Road Intersection

Other Considerations

In addition to the MOEs above, the following considerations will be included in the evaluation of alternatives:

- A gateway effect between I-87 and the Albany International Airport is desired.
- Impacts to existing sensitive environmental features in the project area.
- Impacts to active agricultural land in the project area.
- Impacts to viable commercial enterprises and other social and economic features in the project area.
- A pedestrian-friendly environment within the project area is desired.
- Application of transportation system management, transportation demand management and transit enhancements.
- Project benefits versus project cost.

Unless mentioned in the individual alternative descriptions, all alternatives conform with standard design criteria for highway geometry, and all alternatives provide sufficient median width to allow for future mainline expansion.

Alternative Grouping Explanations ---

Alternative Group A

All of the alternatives in Group A provide a new Exit 3 interchange located between Albany Shaker Road and Sand Creek Road and include a new connector roadway linking the new Exit 3 Interchange with the Albany International Airport Area in both directions.

Alternative Group B

All of the alternatives in Group B provide a new Exit 3 interchange located between Albany Shaker Road and Sand Creek Road providing varying ramp links between I-87, the Albany International Airport Area and/or Wolf Road.

Alternative Group C

All of the alternatives in Group C provide new Exit 4 interchange ramps located between Albany Shaker Road and Route 155 and provide connections between I-87 and the Albany International Airport Area. Most of these alternatives also provide a new Exit 3 interchange between Albany Shaker Road and Sand Creek Road and provide connections between I-87 and Wolf Road.

Alternative Group D

Both of the alternatives in Group D provide new Exit 4 interchange ramps providing access improvements to the Albany International Airport and Wolf Road via Albany Shaker Road.

Alternative Group E

All alternatives in Group E include realigning Wolf Road with Old Wolf Road and provide new ramps for improved access to the Albany International Airport area and Wolf Road.

PART 1

(PASSED LEVEL 1 MOEs)

Part 1-Alternatives that have passed the Level 1 MOEs:

Alternative Group A

- **Alternative A-1**
- **Alternative A-3**

Alternative Group B

- **Alternative B-2**
- **Alternative B-3**
- **Alternative B-4**
- **Alternative B-5**

Alternative Group C

- **Alternative C-1**
- **Alternative C-2**

Alternative Group E

- **Alternative E-4**

Alternative A-1

Alternative A-1 General Description and Key Features:

- New Exit 3 links I-87 to Wolf Road at Metro Park Road and Albany International Airport area via a new connector roadway.
- Diamond interchange at Exit 3.

Traffic Connections:

Provides semi-direct connections ----

A semi-direct connection requires a vehicle to travel on at most one additional roadway between the ramp and its origin or destination.

I-87 northbound to and from Albany International Airport

I-87 southbound to and from Albany International Airport

I-87 northbound to and from Wolf Road

I-87 southbound to and from Wolf Road

Relocates -----

I-87 Exit 4 northbound exit ramp

Eliminates -----

I-87 Exit 4 southbound entrance ramp

How does Alternative A-1 Compare to the Project Objectives?

Level 1 Measures of Effectiveness	Evaluation of Alternative A-1
1) Access from I-87 Northbound to the Airport	Access is improved
2) Access from I-87 Southbound to Wolf Road	Access is improved*
3) Exit 4 and Exit 5 Connections	Allows for connections currently provided

* Traffic is concentrated at a single intersection on Wolf Road.

How does Alternative A-1 Compare to the Other Considerations?

Gateway Effect to Airport

- Provides a gateway opportunity for I-87 traffic.

Environmental/Agricultural Impacts

- Has potential to impact in excess of 1 acre of wetlands.
- Has potential to impact in excess of 1 acre of agricultural lands.
- The connector roadway may traverse through part of the Ann Lee Pond Preserve.

Commercial, Social and Economic Impacts

Requires acquisition of:

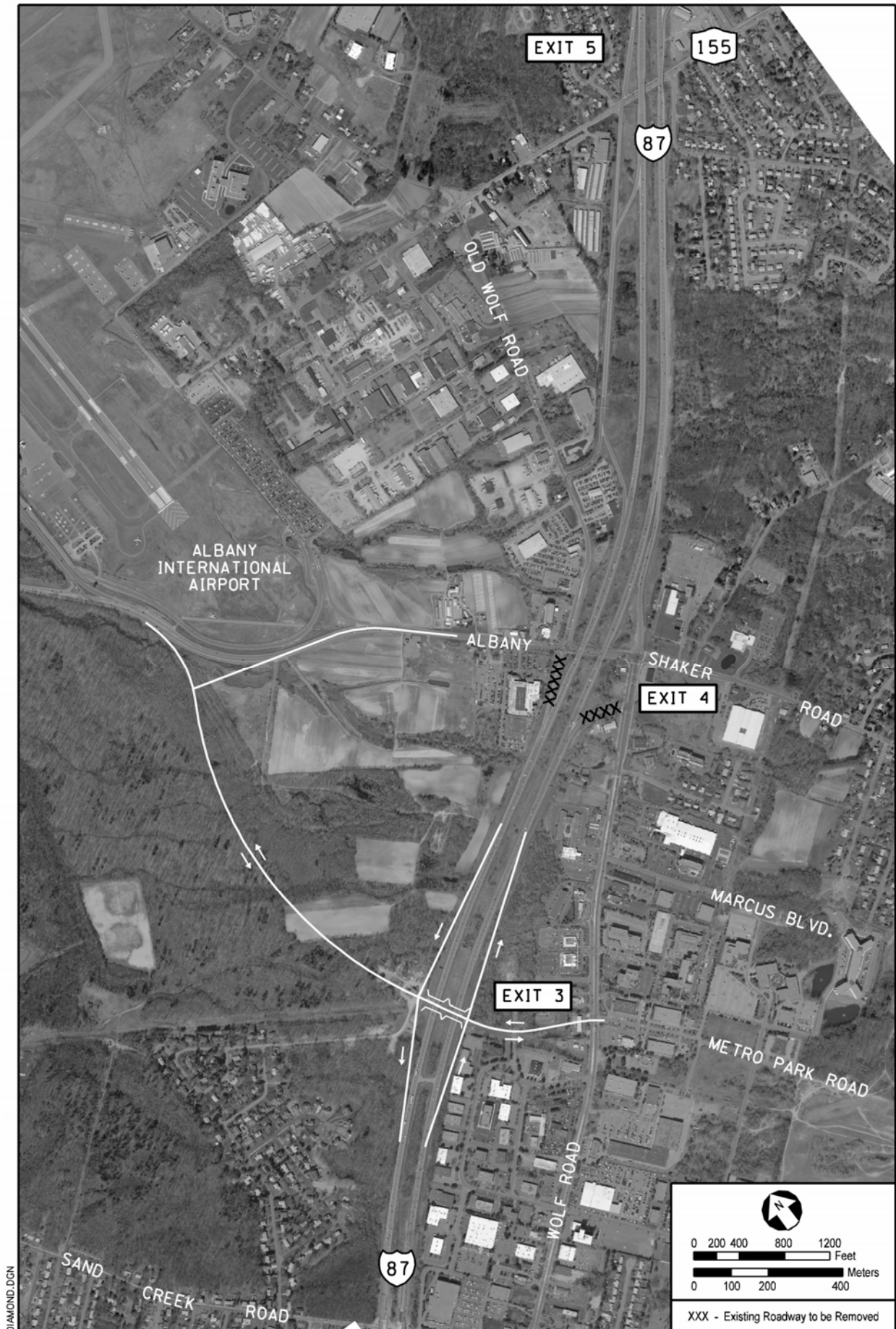
- Hess Gas Station
- Cerone Excavation
- Watkins Motor Lines
- Two office building located on Computer Drive West

A Pedestrian-Friendly Environment

- This alternative concentrates traffic at the Wolf Road/Connector Road intersection, which may require pedestrians to cross a large number of travel lanes.

Approximate Cost

- \$17.0 million (does not include ROW)



Alternative A-3

Alternative A-3 General Description and Key Features:

- New Exit 3 links I-87 to the Albany International Airport area and Wolf Road at Metro Park Road.
- Exit 3 shows a roundabout for traffic control at the northbound ramps. The roundabout can be replaced by a signalized intersection. Although not applicable under all conditions, roundabouts provide intersection design options for all of the alternatives.

Traffic Connections:

Provides direct connections ---- I-87 northbound to and from Albany International Airport
I-87 southbound to and from Albany International Airport

Relocates ----- I-87 Exit 4 southbound entrance ramp

How does Alternative A-3 Compare to the Project Objectives?

Level 1 Measures of Effectiveness	Evaluation of Alternative A-3
1) Access from I-87 Northbound to the Airport	Access is improved
2) Access from I-87 Southbound to Wolf Road	Access is improved
3) Exit 4 and Exit 5 Connections	Allows for connections currently provided

How does Alternative A-3 Compare to the Other Considerations?

Gateway Effect to Airport

- Provides a gateway opportunity for I-87 traffic.

Environmental/Agricultural Impacts

- Has potential to impact in excess of 2 acres of wetlands.
- Has potential to impact in excess of 7 acres of agricultural lands.

Commercial, Social and Economic Impacts

Requires acquisition of:

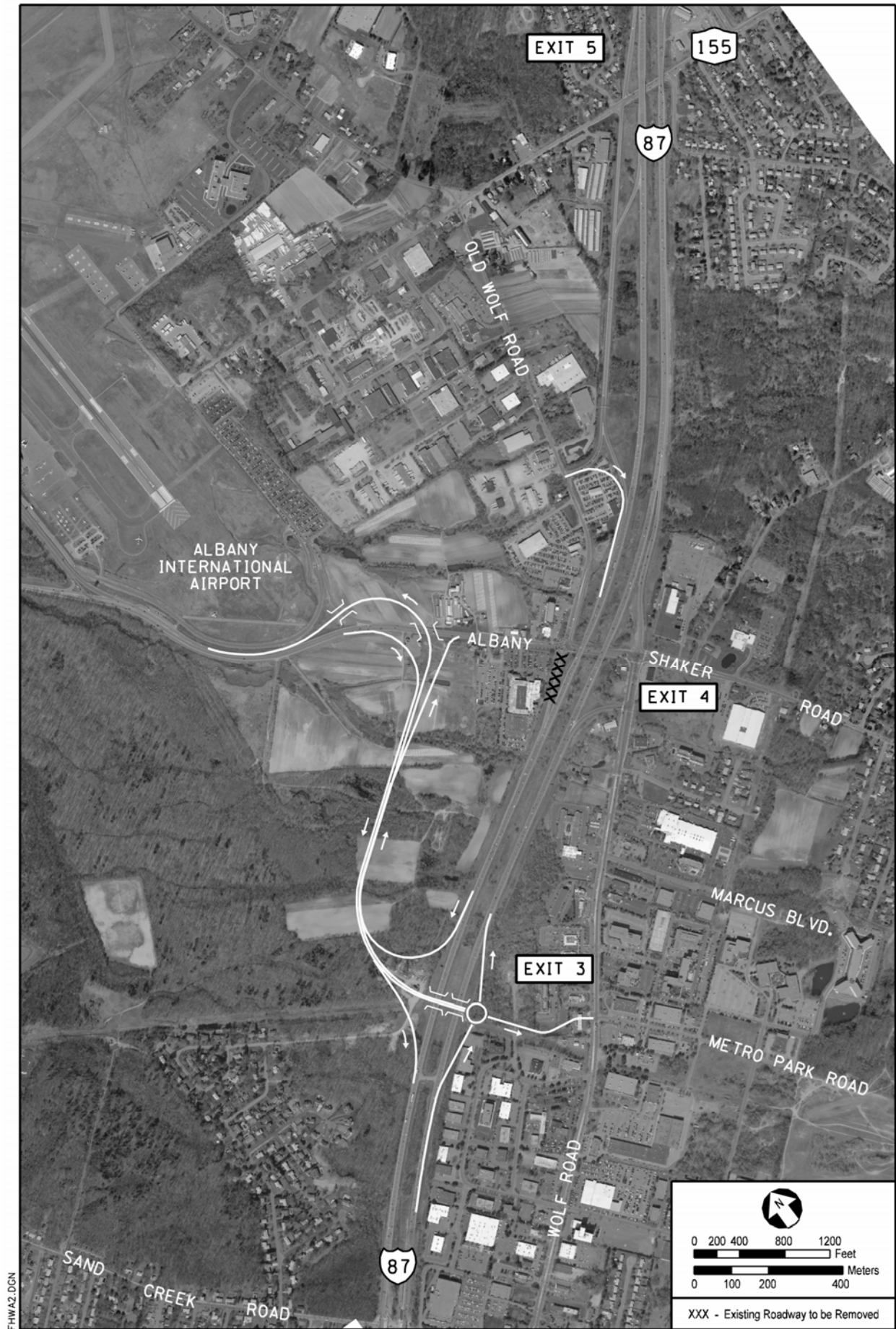
- Cerone Excavation
- Hess Gas Station
- Airport Rapid Park
- Park and Fly
- Two office buildings located on Computer Drive West

A Pedestrian-Friendly Environment

- Provides opportunity for pedestrian accommodations.

Approximate Cost

- \$15.0 million (does not include ROW)



Alternative B-2

Alternative B-2 General Description and Key Features:

- New Exit 3 ramps link I-87 northbound to the Albany International Airport area and I-87 southbound to Wolf Road at Marcus Boulevard.

Traffic Connections:

Provides direct connections ----- I-87 northbound to Albany International Airport
I-87 southbound to Wolf Road

Relocates ----- I-87 Exit 4 southbound entrance ramp

How does Alternative B-2 Compare to the Project Objectives?

Level 1 Measures of Effectiveness	Evaluation of Alternative B-2
1) Access from I-87 Northbound to the Airport	Access is improved
2) Access from I-87 Southbound to Wolf Road	Access is improved
3) Exit 4 and Exit 5 Connections	Allows for connections currently provided

How does Alternative B-2 Compare to the Other Considerations?

Gateway Effect to Airport

- Provides a gateway opportunity for I-87 northbound traffic.

Environmental/Agricultural Impacts

- Has potential to impact in excess of 6 acres of agricultural lands.

Commercial, Social and Economic Impacts

Requires acquisition of:

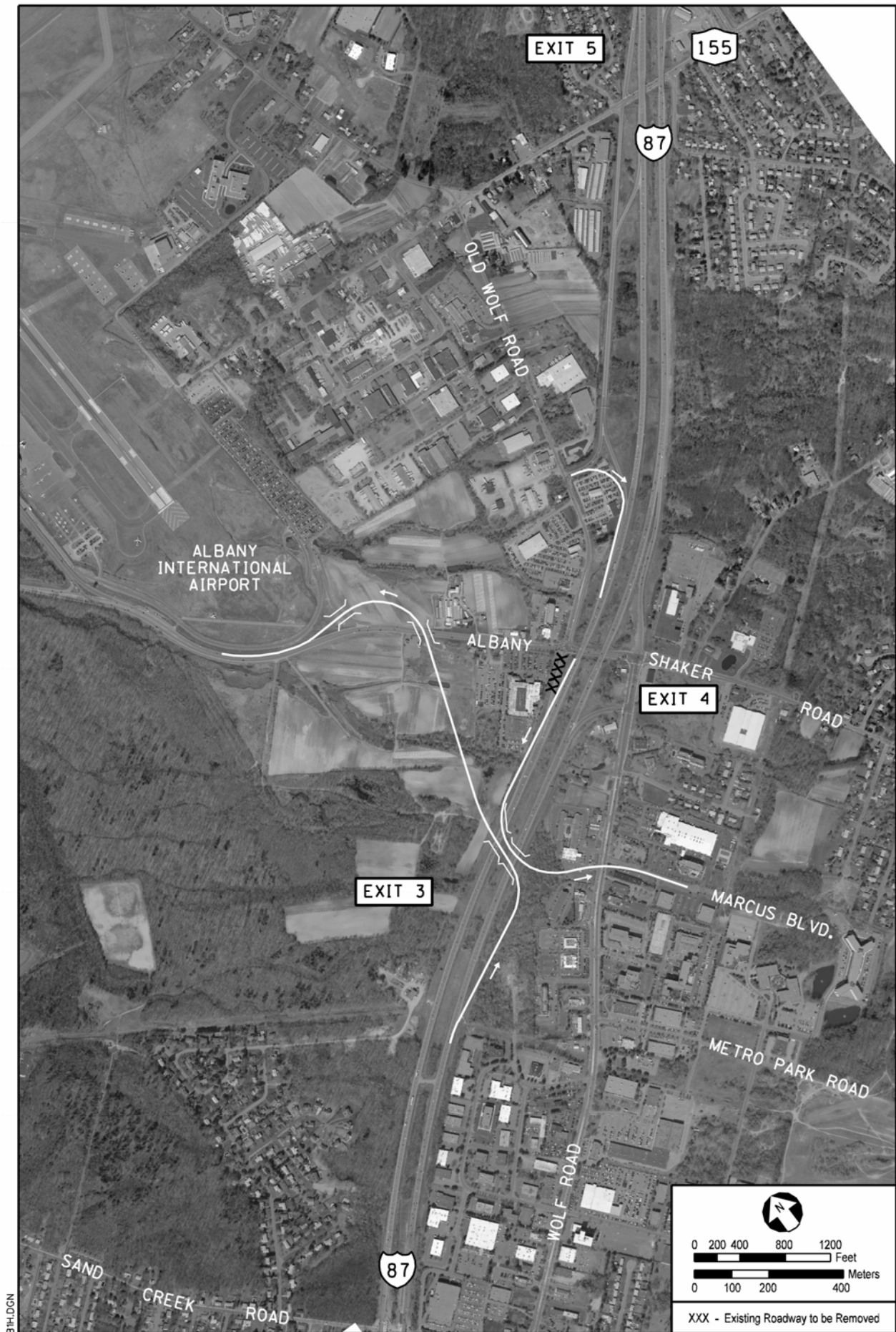
- Best Western and Marcus Plaza parking
- Airport Rapid Park
- Park and Fly

A Pedestrian-Friendly Environment

- Provides opportunity for pedestrian accommodations.

Approximate Cost

- \$14.0 million (does not include ROW)



Alternative B-3

Alternative B-3 General Description and Key Features:

- New Exit 3 ramps link I-87 northbound to the Albany International Airport area and I-87 southbound to Wolf Road at Metro Park Road.
- Provides reconfigured Exit 4 southbound entrance ramp.

Traffic Connections:

Provides direct connections ----- I-87 northbound to Albany International Airport
I-87 southbound to Wolf Road

Reconfigures ----- I-87 Exit 4 southbound entrance ramp

How does Alternative B-3 Compare to the Project Objectives?

Level 1 Measures of Effectiveness	Evaluation of Alternative B-3
1) Access from I-87 Northbound to the Airport	Access is improved
2) Access from I-87 Southbound to Wolf Road	Access is improved
3) Exit 4 and Exit 5 Connections	Allows for connections currently provided

How does Alternative B-3 Compare to the Other Considerations?

Gateway Effect to Airport

- Provides a gateway opportunity for I-87 northbound traffic.

Environmental/Agricultural Impacts

- Has potential to impact in excess of 1 acre of wetlands.
- Has potential to impact in excess of 10 acres of agricultural lands.

Commercial, Social and Economic Impacts

Requires acquisition of:

- Hess Gas Station
- Airport Rapid Park
- Four office buildings located on Computer Drive West

A Pedestrian-Friendly Environment

- Provides opportunity for pedestrian accommodations.

Approximate Cost

- \$15.5 million (does not include ROW)



Alternative B-4

Alternative B-4 General Description and Key Features:

- New Exit 3 ramps link I-87 northbound to the Albany International Airport area and I-87 southbound to Wolf Road at Metro Park Road.
- Provides relocated Exit 4 southbound entrance ramp.

Traffic Connections:

Provides direct connections ----- I-87 northbound to Albany International Airport
I-87 southbound to Wolf Road

Relocates ----- I-87 Exit 4 southbound entrance ramp

How does Alternative B-4 Compare to the Project Objectives?

Level 1 Measures of Effectiveness	Evaluation of Alternative B-4
1) Access from I-87 Northbound to the Airport	Access is improved
2) Access from I-87 Southbound to Wolf Road	Access is improved
3) Exit 4 and Exit 5 Connections	Allows for connections currently provided

How does Alternative B-4 Compare to the Other Considerations?

Gateway Effect to Airport

- Provides a gateway opportunity for I-87 northbound traffic.

Environmental/Agricultural Impacts

- Has potential to impact in excess of 3 acres of wetlands.
- Has potential to impact in excess of 9 acres of agricultural lands.

Commercial, Social and Economic Impacts

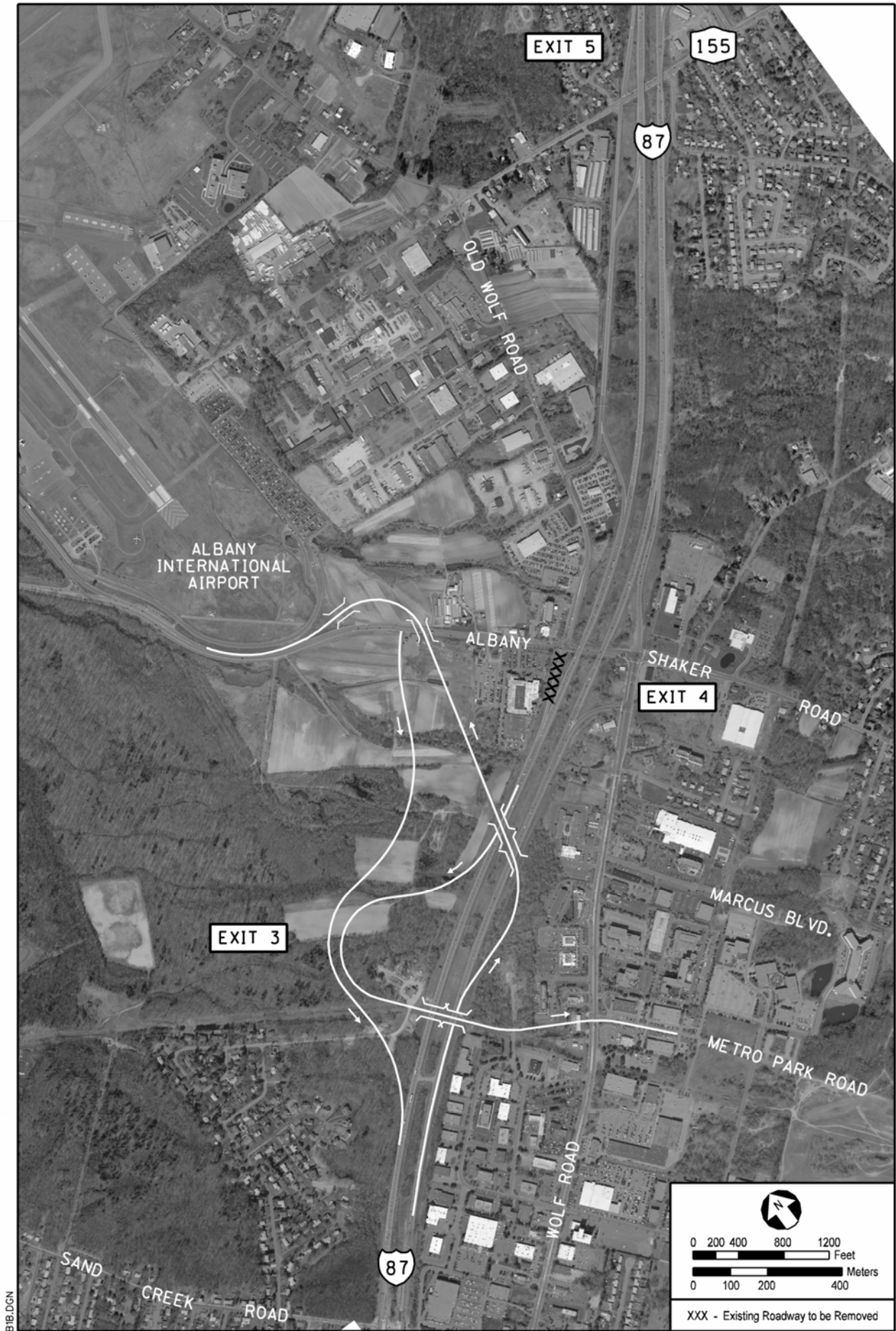
- Close proximity to Sunset Boulevard neighborhood.
- Requires acquisition of:
 - Hess Gas Station
 - Cerone Excavation
 - Airport Rapid Park

A Pedestrian-Friendly Environment

- Provides opportunity for pedestrian accommodations.

Approximate Cost

- \$19.5 million (does not include ROW)



Alternative B-5

Alternative B-5 General Description and Key Features:

- New Exit 3 ramps link I-87 northbound to Wolf Road at Marcus Boulevard and to the Albany International Airport area and links I-87 southbound to and from Wolf Road at Metro Park Road.
- Provides relocated Exit 4 southbound entrance ramp from Albany Shaker Road.

Traffic Connections:

Provides direct connections ----- I-87 northbound to Albany International Airport
 I-87 northbound to Wolf Road
 I-87 southbound to and from Wolf Road

Relocates ----- I-87 Exit 4 southbound entrance ramp
 I-87 Exit 4 northbound exit ramp

How does Alternative B-5 Compare to the Project Objectives?

Level 1 Measures of Effectiveness	Evaluation of Alternative B-5
1) Access from I-87 Northbound to the Airport	Access is improved
2) Access from I-87 Southbound to Wolf Road	Access is improved
3) Exit 4 and Exit 5 Connections	Allows for connections currently provided

How does Alternative B-5 Compare to the Other Considerations?

Gateway Effect to Airport

- Provides a gateway opportunity for I-87 northbound traffic.

Environmental/Agricultural Impacts

- Has potential to impact in excess of 3 acres of wetlands.
- Has potential to impact in excess of 9 acres of agricultural lands.

Commercial, Social and Economic Impacts

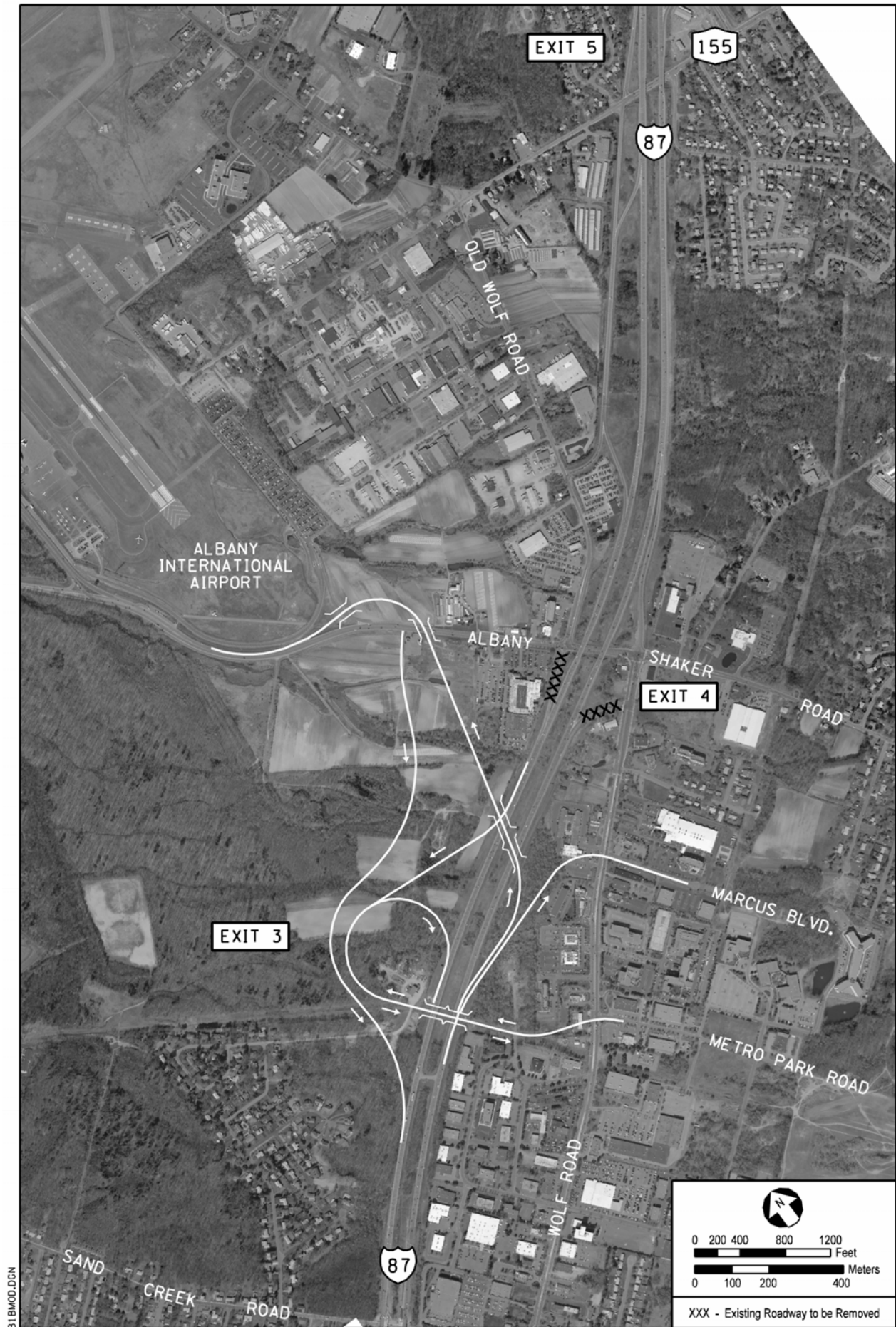
- Close proximity to Sunset Boulevard neighborhood.
- Requires acquisition of:
 - Hess Gas Station
 - Cerone Excavation
 - Airport Rapid Park
 - Best Western

A Pedestrian-Friendly Environment

- Provides opportunity for pedestrian accommodations.

Approximate Cost

- \$21.5 million (does not include ROW)



Alternative C-1

Alternative C-1 General Description and Key Features:

- New Exit 3 provides direct connection from I-87 northbound to Wolf Road at Marcus Boulevard and improved access from I-87 southbound to Wolf Road via Albany Shaker Road.
- New Exit 4 provides direct access from I-87 northbound and southbound to the Albany International Airport area.

Traffic Connections:

Provides direct connections ----- I-87 northbound to Albany International Airport
 I-87 southbound to Albany International Airport
 I-87 northbound to Wolf Road

Relocates ----- I-87 Exit 4 northbound exit ramp
 I-87 Exit 4 southbound entrance ramp

How does Alternative C-1 Compare to the Project Objectives?

Level 1 Measures of Effectiveness	Evaluation of Alternative C-1
1) Access from I-87 Northbound to the Airport	Access is improved*
2) Access from I-87 Southbound to Wolf Road	Access is improved**
3) Exit 4 and Exit 5 Connections	Allows for connections currently provided

* Distance between northbound Exit 4 and Exit 5 needs to be evaluated for traffic operations, LOS and safety.

** Distance between southbound Exit 4 and Exit 5 needs to be evaluated for traffic operations, LOS and safety.

How does Alternative C-1 Compare to the Other Considerations?

Gateway Effect to Airport

- Provides a gateway opportunity for I-87 traffic.

Environmental/Agricultural Impacts

- Has potential to impact in excess of 6 acres of agricultural lands.

Commercial, Social and Economic Impacts

Requires acquisition of:

- A-Plus Mini-Mart
- Park and Fly
- Watkins Motor Lines
- Bridgestone
- Excelsior Freight System
- Albany Air Cargo
- Roadway Package Systems
- Best Western and Marcus Plaza Parking

A Pedestrian-Friendly Environment

- Provides opportunity for pedestrian accommodations.

Approximate Cost

- \$13.5 million (does not include ROW)



Alternative C-2

Alternative C-2 General Description and Key Features:

- New Exit 3 links I-87 to and from Wolf Road at Metro Park Road.
- New Exit 4 links I-87 to and from the Albany International Airport area.

Traffic Connections:

Provides direct connections ---- I-87 northbound to and from Albany International Airport
 I-87 southbound to and from Albany International Airport
 I-87 northbound to and from Wolf Road
 I-87 southbound to and from Wolf Road

Relocates ----- I-87 Exit 4 northbound and southbound exit ramp
 I-87 Exit 5 southbound entrance ramp

Eliminates ----- Existing I-87 Exit 4 northbound entrance ramp

How does Alternative C-2 Compare to the Project Objectives?

Level 1 Measures of Effectiveness	Evaluation of Alternative C-2
1) Access from I-87 Northbound to the Airport	Access is improved*
2) Access from I-87 Southbound to Wolf Road	Access is improved**
3) Exit 4 and Exit 5 Connections	Allows for connections currently provided

* Distance between northbound Exit 4 and Exit 5 needs to be evaluated for traffic operations, LOS and safety.

** Distance between southbound Exit 4 and Exit 5 needs to be evaluated for traffic operations, LOS and safety. Traffic is concentrated at a single intersection on Wolf Road

How does Alternative C-2 Compare to the Other Considerations?

Gateway Effect to Airport

- Provides a gateway opportunity for I-87 traffic.

Environmental/Agricultural Impacts

- Has potential to impact in excess of 1 acre of wetlands.
- Has potential to impact in excess of 2 acres of agricultural lands.

Commercial, Social and Economic Impacts

Requires acquisition of:

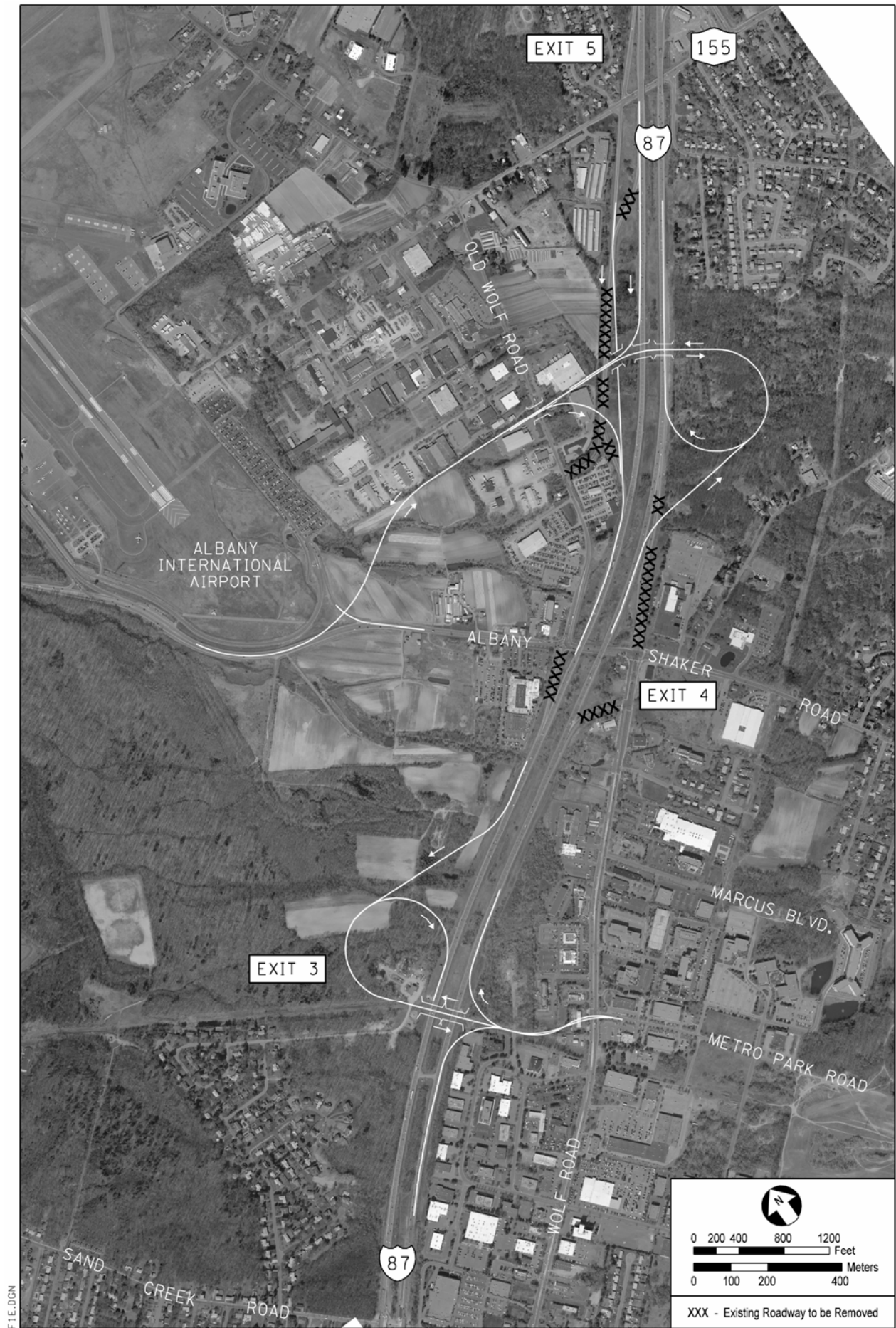
- Hess Gas Station
- Cerone Excavation
- Watkins Motor Lines
- Colonie Builders Inc.
- Two-story house next to the Park and Fly facility
- Office building located on Computer Drive West
- MK Rail Corporation
- Napa Auto Parts
- Airborne Express
- Atlantic Detroit Diesel Allison

A Pedestrian-Friendly Environment

- This alternative concentrates traffic at the Wolf Road/Metro Park Road intersection, which may require pedestrians to cross a large number of travel lanes.

Approximate Cost

- \$28.5 million (does not include ROW)



Alternative E-4

Alternative E-4 General Description and Key Features:

- New Exit 3 links I-87 northbound to Wolf Road and Wolf Road to I-87 southbound.
- New Exit 4 links I-87 northbound to the Albany International Airport area.

Traffic Connections:

Provides direct connections ----- I-87 northbound to Albany International Airport
 I-87 northbound to and from Wolf Road
 I-87 southbound to and from Wolf Road

Relocates ----- I-87 Exit 4 northbound exit ramp

How does Alternative E-4 Compare to the Project Objectives?

Level 1 Measures of Effectiveness	Evaluation of Alternative E-4
1) Access from I-87 Northbound to the Airport	Access is improved
2) Access from I-87 Southbound to Wolf Road	Access is improved
3) Exit 4 and Exit 5 Connections	Allows for connections currently provided

How does Alternative E-4 Compare to the Other Considerations?

Gateway Effect to Airport

- Provides a gateway opportunity for I-87 northbound traffic.

Environmental/Agricultural Impacts

- Has potential to impact in excess of 2 acres of wetlands.
- Has potential to impact in excess of 5 acres of agricultural lands.

Commercial, Social and Economic Impacts

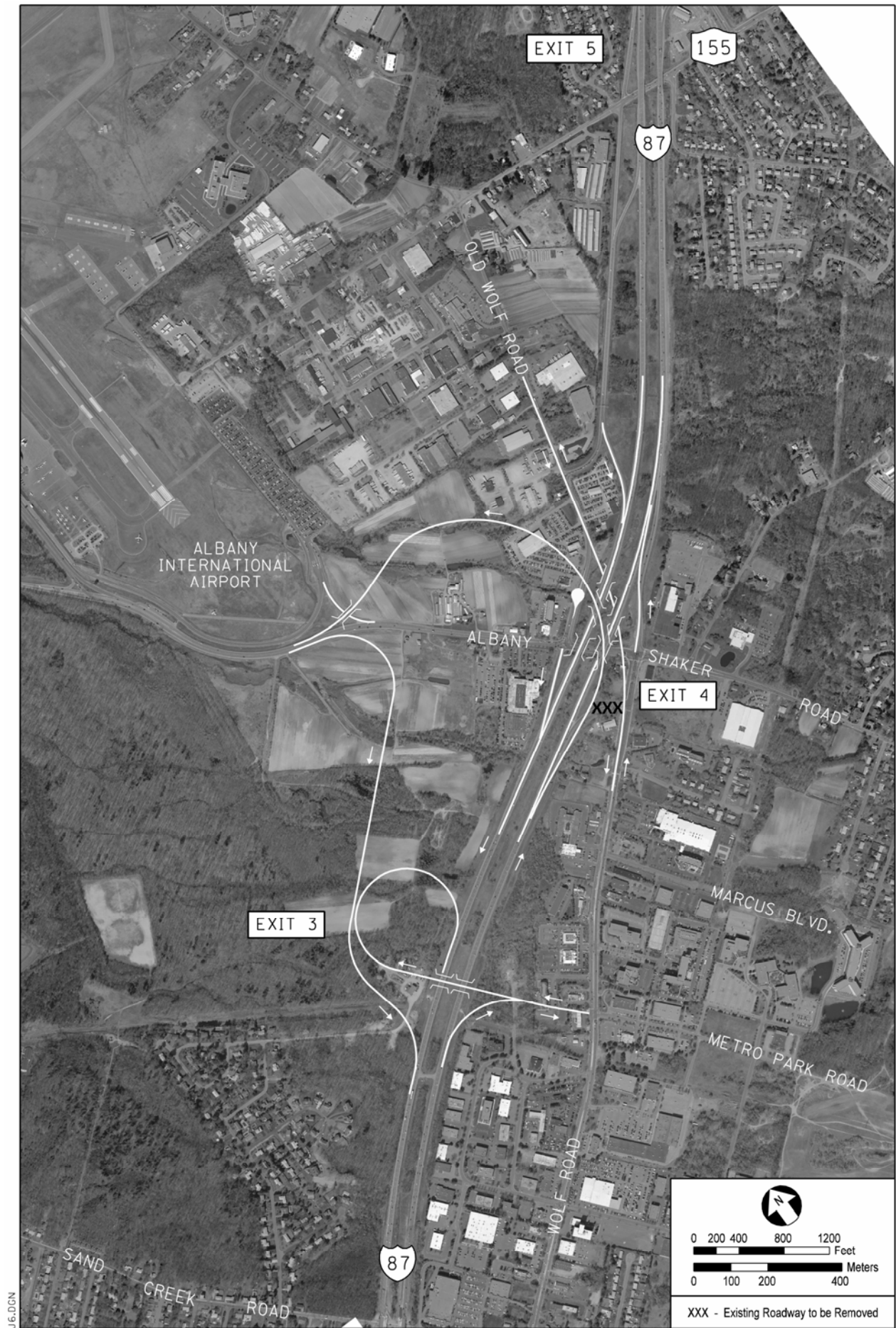
- Close proximity to Sunset Boulevard neighborhood.
- Requires acquisition of:
 - A-Plus Mini Mart
 - Bridgestone
 - Park and Fly
 - Colonie Builders Inc.
 - One office building located on Computer Drive West
 - Hess Gas Station
 - The Pavilion Restaurant
 - Cerone Excavation

A Pedestrian-Friendly Environment

- Provides opportunity for pedestrian accommodations.

Approximate Cost

- \$35.0 million (does not include ROW)



PART 2

(DID NOT PASS LEVEL 1 MOEs)

Part 2-Alternatives that did not pass the Level 1 MOEs:

Alternative Group A

- **Alternative A-2**

Alternative Group B

- **Alternative B-1**
- **Alternative B-6**

Alternative Group C

- **Alternative C-3**
- **Alternative C-4**

Alternative Group D

- **Alternative D-1**
- **Alternative D-2**

Alternative Group E

- **Alternative E-1**
- **Alternative E-2**
- **Alternative E-3**

Alternative A-2

Alternative A-2 General Description and Key Features:

- New Exit 3 links I-87 to the Albany International Airport area via a new connector road.

Traffic Connections:

Provides direct connections ---- I-87 northbound to and from Albany International Airport
I-87 southbound to and from Albany International Airport

Relocates ----- I-87 Exit 4 southbound entrance ramp

How does Alternative A-2 Compare to the Project Objectives?

Level 1 Measures of Effectiveness	Evaluation of Alternative A-2
1) Access from I-87 Northbound to the Airport	Access is improved
2) Access from I-87 Southbound to Wolf Road	Access is not improved
3) Exit 4 and Exit 5 Connections	Allows for connection currently provided

How does Alternative A-2 Compare to the Other Considerations?

Gateway Effect to Airport

- Provides a gateway opportunity for I-87 traffic.

Environmental/Agricultural Impacts

- Has potential to impact in excess of 3 acres of wetlands.
- The connector roadway may traverse through part of the Ann Lee Pond Preserve.

Commercial, Social and Economic Impacts

Requires acquisition of:

- Cerone Excavation
- Three office buildings located on Computer Drive West

A Pedestrian-Friendly Environment

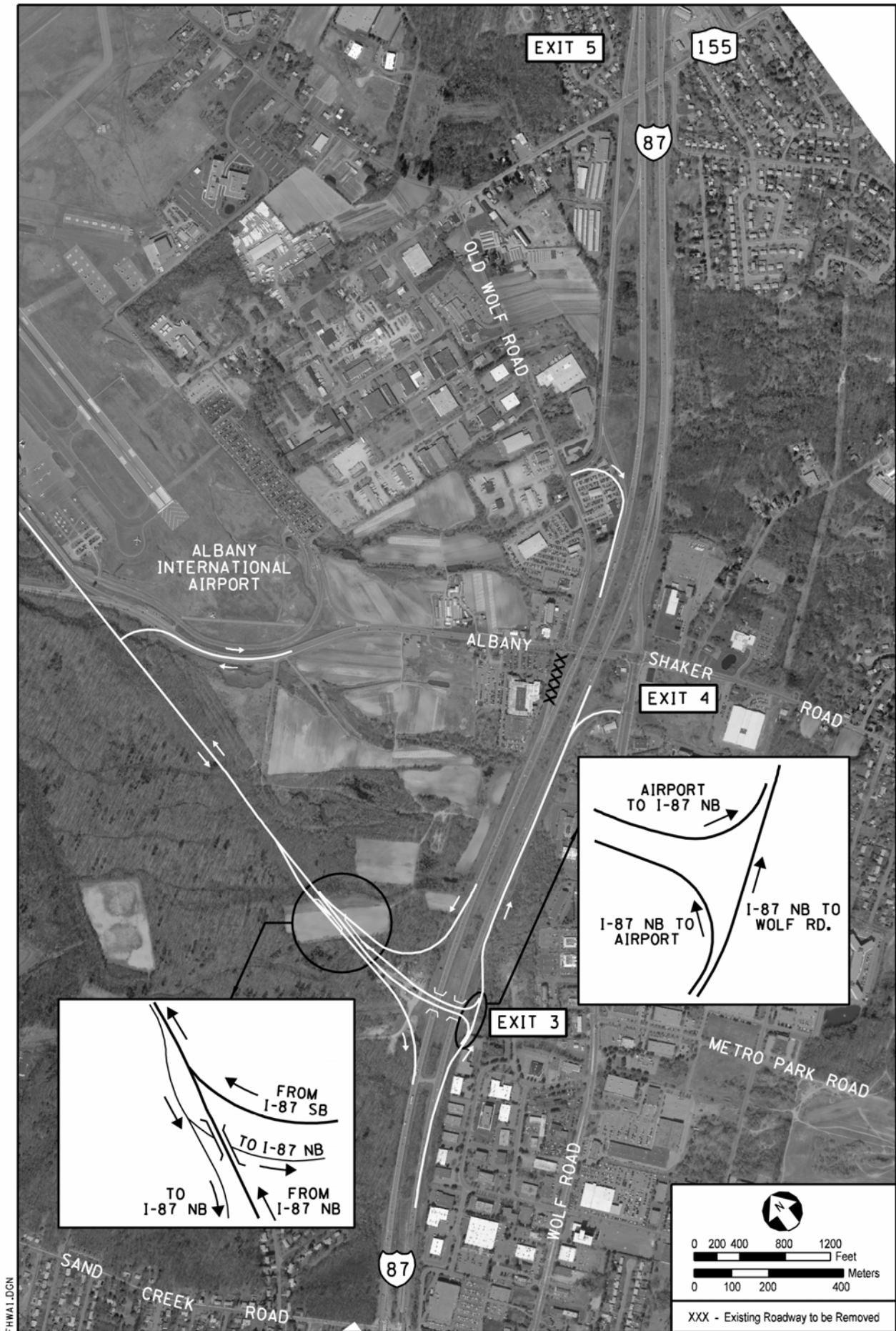
- Provides opportunity for pedestrian accommodations.

Conformance with Standards

- New northbound entrance and exit ramps have non-standard horizontal curves, with the entrance ramp approaching a yield condition.

Approximate Cost

- \$18.5 million (does not include ROW)



Alternative B-1

Alternative B-1 General Description and Key Features:

- New Exit 3 links I-87 northbound traffic to the Albany International Airport area.

Traffic Connections:

Provides direct connections ----- I-87 northbound to Albany International Airport

How does Alternative B-1 Compare to the Project Objectives?

Level 1 Measures of Effectiveness	Evaluation of Alternative B-1
1) Access from I-87 Northbound to the Airport	Access is improved
2) Access from I-87 Southbound to Wolf Road	Access is not improved
3) Exit 4 and Exit 5 Connections	Allows for connections currently provided

How does Alternative B-1 Compare to the Other Considerations?

Gateway Effect to Airport

- Provides a gateway opportunity for I-87 northbound traffic.

Environmental/Agricultural Impacts

- Has potential to impact in excess of 6 acres of agricultural lands.

Commercial, Social and Economic Impacts

Requires acquisition of:

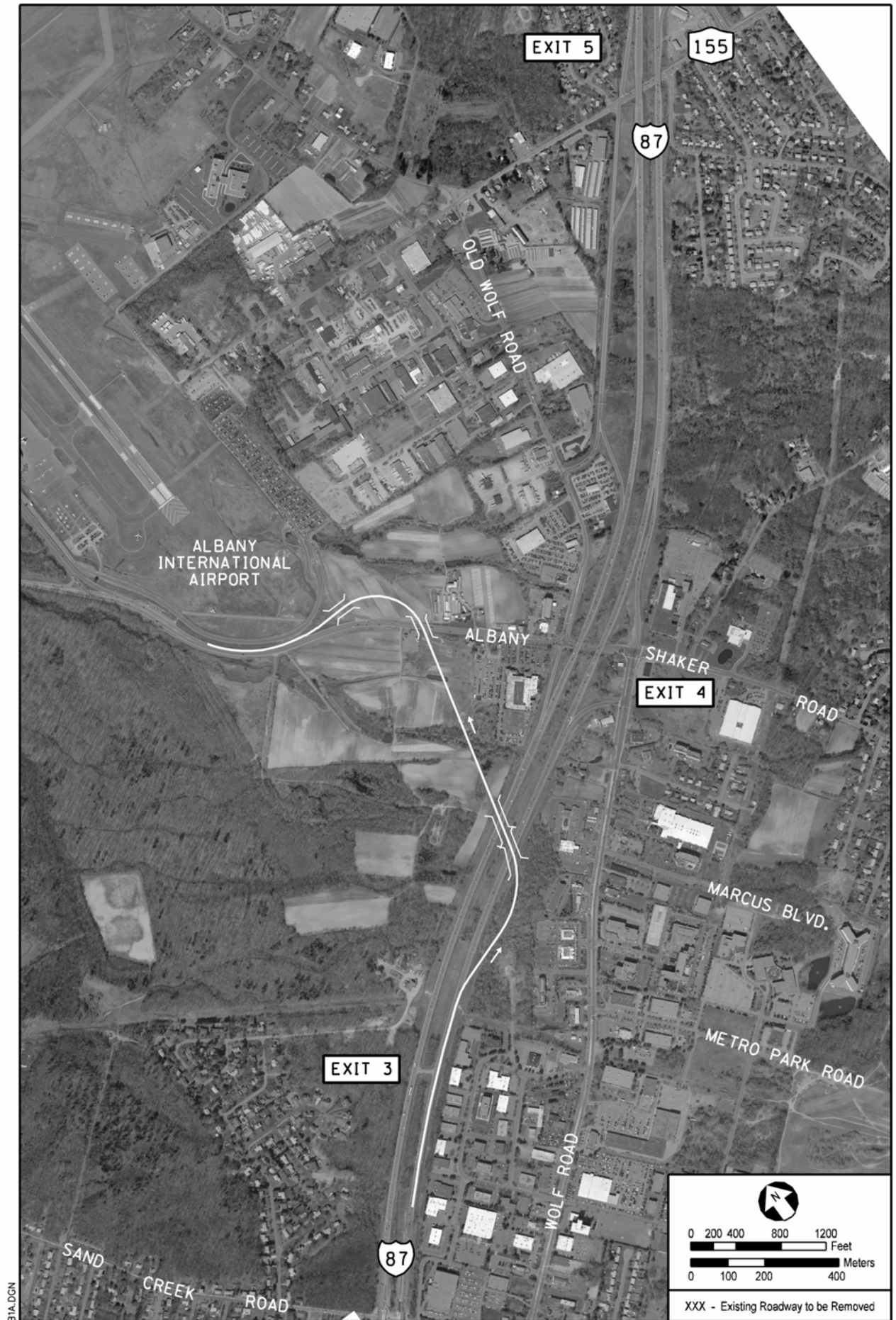
- Airport Rapid Park

A Pedestrian-Friendly Environment

- Provides opportunity for pedestrian accommodations.

Approximate Cost

- \$9.5 million (does not include ROW)



Alternative B-6

Alternative B-6 General Description and Key Features:

- New Exit 3 links I-87 northbound traffic to the Albany International Airport area.
- New Exit 3 links I-87 southbound traffic to and from the Albany International Airport area.

Traffic Connections:

Provides direct connection ----- I-87 southbound to Wolf Road

Provides semi-direct connections ---- I-87 northbound to Albany International Airport
I-87 southbound to and from Albany International Airport

How does Alternative B-6 Compare to the Project Objectives?

Measures of Effectiveness	Evaluation of Alternative B-6
1) Access from I-87 Northbound to the Airport	Access is improved
2) Access from I-87 Southbound to Wolf Road	Access is improved
3) Exit 4 and Exit 5 Connections	Allows for connections currently provided

How does Alternative B-6 Compare to the Other Considerations?

Provide Gateway Effect to Airport

- Does not provide opportunity for gateway effect.

Minimize Environmental/Agricultural Impacts

- Has potential to impact in excess of 10 acres of agricultural lands.

Minimize Property Acquisitions

Requires acquisition of:

- Best Western

Create a Pedestrian-Friendly Environment

- Provides opportunity for pedestrian accommodations.

Approximate Cost

- \$12.0 million (does not include ROW)



Alternative C-3

Alternative C-3 General Description and Key Features:

- New Exit 3 links I-87 southbound to and from Wolf Road at Metro Park Road and I-87 northbound to Wolf Road at Marcus Boulevard.
- New Exit 4 links I-87 to and from the Albany International Airport area.

Traffic Connections:

Provides direct connections ---- I-87 northbound to and from Albany International Airport
 I-87 southbound to and from Albany International Airport
 I-87 northbound to Wolf Road
 I-87 southbound to and from Wolf Road

Relocates ----- I-87 Exit 4 northbound exit ramp

Eliminates ----- I-87 Exit 4 southbound entrance ramp
 I-87 Exit 5 southbound entrance ramp

How does Alternative C-3 Compare to the Project Objectives?

Level 1 Measures of Effectiveness	Evaluation of Alternative C-3
1) Access from I-87 Northbound to the Airport	Access is improved*
2) Access from I-87 Southbound to Wolf Road	Access is improved**
3) Exit 4 and Exit 5 Connections	Does not allow for southbound entrance ramp in vicinity of Exit 5

* Distance between northbound Exit 4 and Exit 5 needs to be evaluated for traffic operations, LOS and safety.

** Distance between southbound Exit 4 and Exit 5 needs to be evaluated for traffic operations, LOS and safety.

How does Alternative C-3 Compare to the Other Considerations?

Gateway Effect to Airport

- Provides a gateway opportunity for I-87 traffic.

Environmental/Agricultural Impacts

- Has potential to impact in excess of 1 acre of wetlands.
- Has potential to impact in excess of 2 acres of agricultural lands.

Commercial, Social and Economic Impacts

Requires acquisition of:

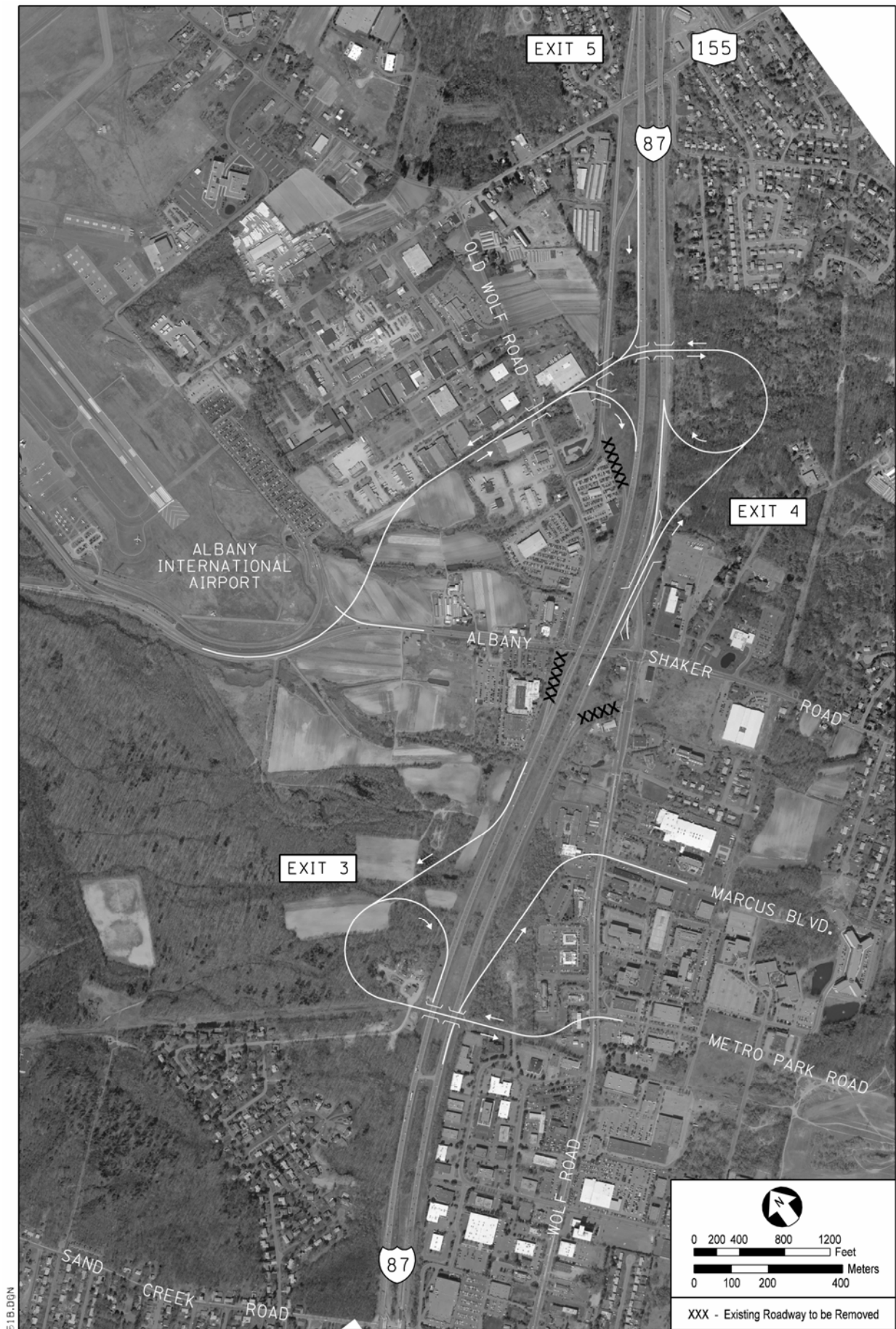
- Hess Gas Station
- Cerone Excavation
- Watkins Motor Lines
- Airborne Express
- Atlantic Detroit Diesel Allison
- MK Rail Corporation
- Colonie Builders Inc.
- Napa Auto Parts
- Best Western

A Pedestrian-Friendly Environment

- Provides opportunity for pedestrian accommodations.

Approximate Cost

- \$29.5 million (does not include ROW)



Alternative C-4

Alternative C-4 General Description and Key Features:

- New Exit 4 links I-87 to and from the Albany International Airport area and Wolf Road.
- New Exit 4 uses a Single Point Urban Interchange for traffic control.

Traffic Connections:

Provides direct connections ----- I-87 southbound to and from Albany International Airport
I-87 northbound to and from Wolf Road

Provides semi-direct connection ----- I-87 northbound to and from Albany International Airport
I-87 southbound to and from Wolf Road

A semi-direct connection requires a vehicle to travel on at most one additional roadway between the ramp and its origin or destination.

Relocates ----- All I-87 Exit 4 connections to new interchange

Eliminates ----- I-87 Exit 5 southbound entrance ramp

How does Alternative C-4 Compare to the Project Objectives?

Level 1 Measures of Effectiveness	Evaluation of Alternative C-4
1) Access from I-87 Northbound to the Airport	Access is improved*
2) Access from I-87 Southbound to Wolf Road	Access is improved**
3) Exit 4 and Exit 5 Connections	Does not allow for southbound entrance ramp in vicinity of Exit 5
4) Median Width	Does not provide sufficient median width

* Distance between northbound Exit 4 and Exit 5 needs to be evaluated for traffic operations, LOS and safety.

** Traffic is concentrated at the single point urban intersection.

How does Alternative C-4 Compare to the Other Considerations?

Gateway Effect to Airport

- Provides a gateway opportunity for I-87 traffic.

Environmental/Agricultural Impacts

- Has potential to impact in excess of 3 acres of agricultural lands.

Commercial, Social and Economic Impacts

Requires acquisition of:

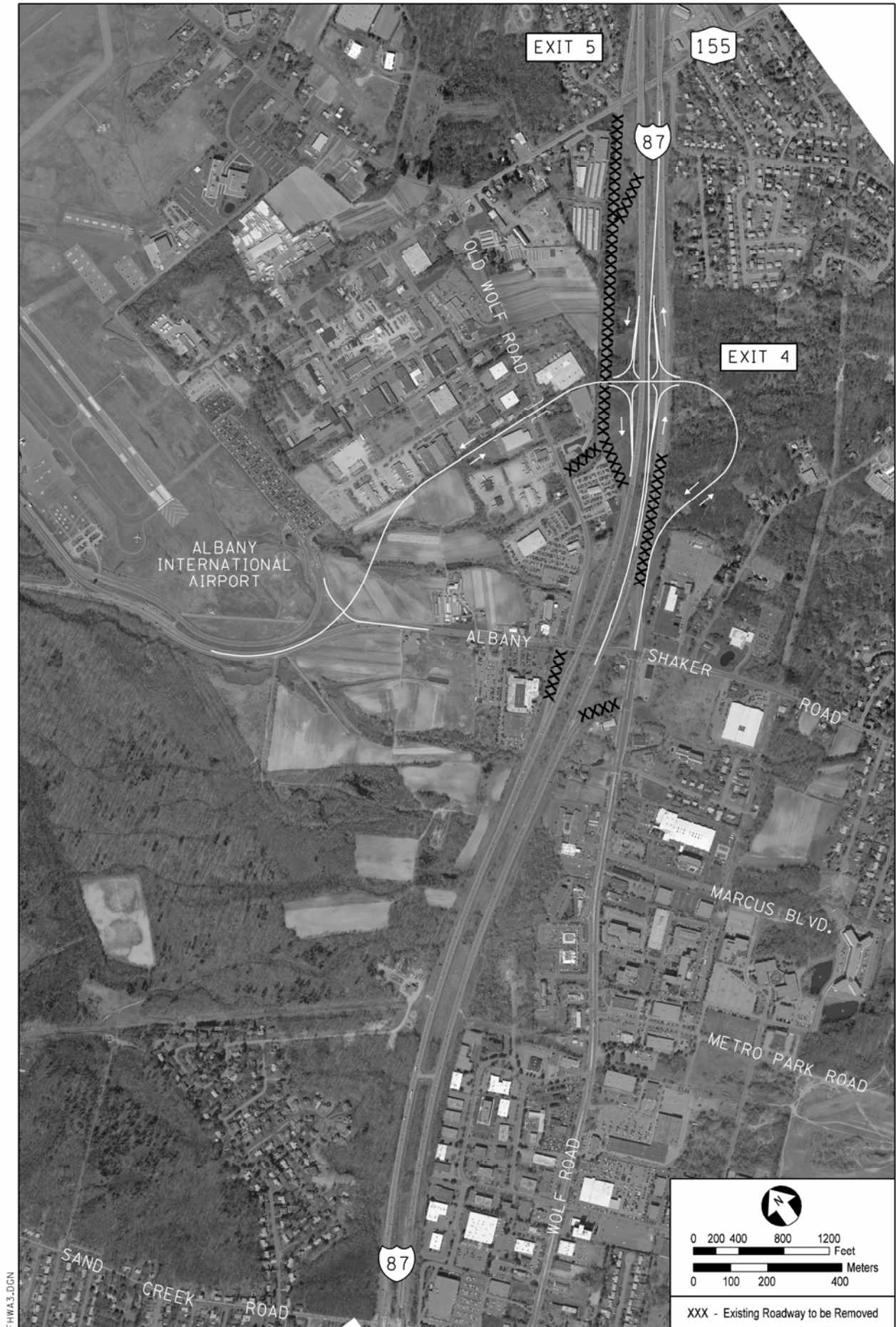
- Airborne Express
- Colonie Builders Inc.
- Napa Auto Parts
- Atlantic Detroit Diesel Allison
- Watkins Motor Line
- MK Rail Group

A Pedestrian-Friendly Environment

- Provides opportunity for pedestrian accommodations.

Approximate Cost

- \$20.0 million (does not include ROW)



Alternative D-1

Alternative D-1 General Description and Key Features:

- Modifies Exit 4 to link I-87 southbound to and from Albany Shaker Road and reduce the number of turns required for vehicles to reach Wolf Road and the Albany International Airport area.

Traffic Connections:

Provides semi-direct connections -----

I-87 southbound to and from Albany International Airport

A semi-direct connection requires a vehicle to travel on at most one additional roadway between the ramp and its origin or destination.

Relocates -----

I-87 Exit 4 northbound exit ramp

I-87 Exit 4 southbound entrance ramp

How does Alternative D-1 Compare to the Project Objectives?

Level 1 Measures of Effectiveness	Evaluation of Alternative D-1
1) Access from I-87 Northbound to the Airport	Access is not improved
2) Access from I-87 Southbound to Wolf Road	Access is improved*
3) Exit 4 and Exit 5 Connections	Allows for connections currently provided

* Distance between southbound Exit 4 and Exit 5 needs to be evaluated for traffic operations, LOS and safety.

How does Alternative D-1 Compare to the Other Considerations?

Gateway Effect to Airport

- Does not provide opportunity for gateway effect.

Environmental/Agricultural Impacts

- Has potential to impact in excess of 6 acres of agricultural lands.

Commercial, Social and Economic Impacts

Requires acquisition of:

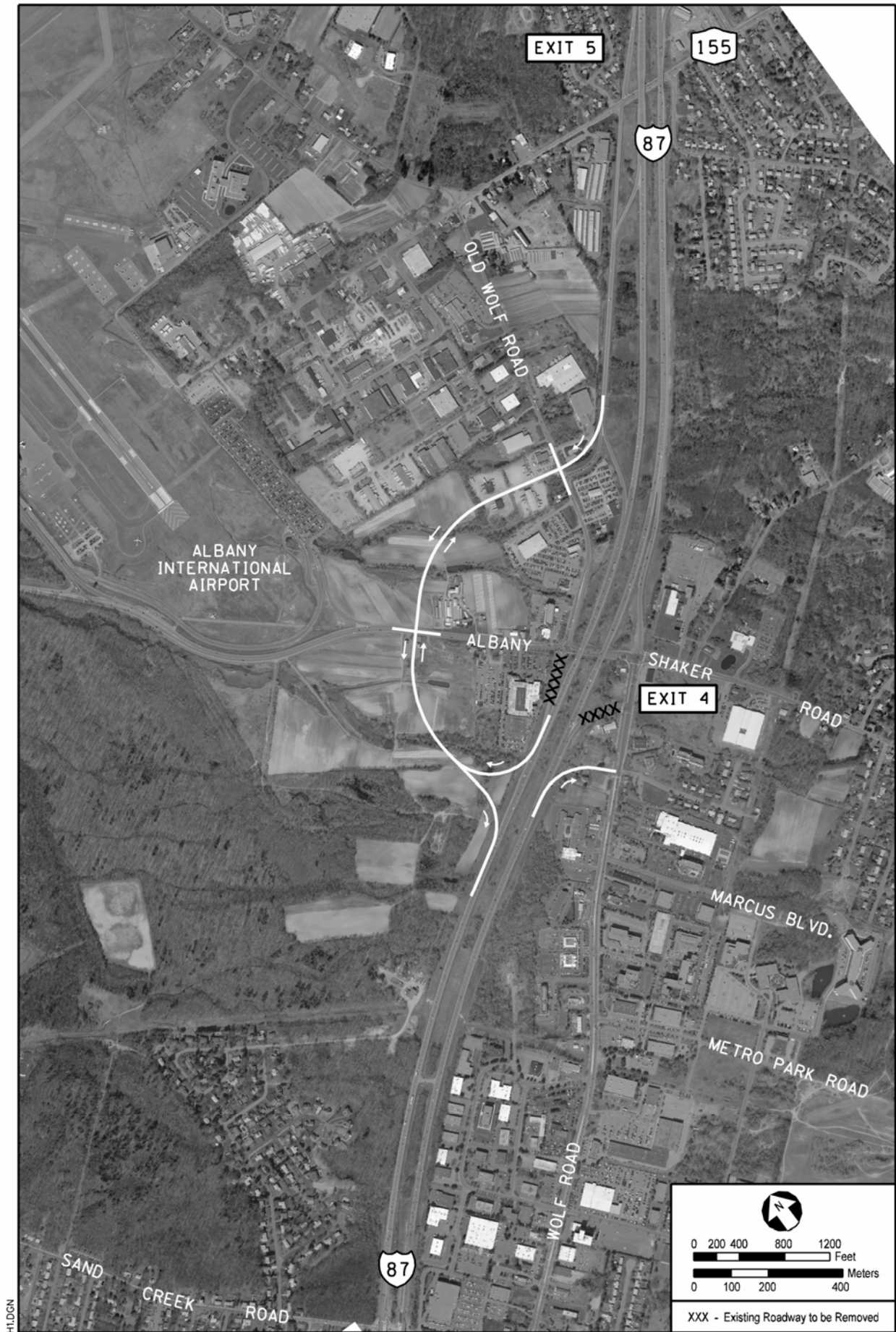
- Airport Rapid Park
- Portion of Atlantic Detroit Diesel Allison parking

A Pedestrian-Friendly Environment

- Provides opportunity for pedestrian accommodations.

Approximate Cost

- \$3.5 million (does not include ROW)



Alternative D-2

Alternative D-2 General Description and Key Features:

- Modifies Exit 4 to link I-87 southbound to and from Albany Shaker Road and reduce the number of turns required for vehicles to reach Wolf Road and the Albany International Airport area.
- Realignment Old Wolf Road.

Traffic Connections:

Provides semi-direct connection -----

I-87 southbound to and from Albany International Airport

A semi-direct connection requires a vehicle to travel on at most one additional roadway between the ramp and its origin or destination.

Relocates -----

I-87 Exit 4 northbound exit ramp

I-87 Exit 4 southbound entrance and exit ramps

I-87 Exit 5 southbound entrance ramp

How does Alternative D-2 Compare to the Project Objectives?

Level 1 Measures of Effectiveness	Evaluation of Alternative D-2
1) Access from I-87 Northbound to the Airport	Access is not improved
2) Access from I-87 Southbound to Wolf Road	Access is improved*
3) Exit 4 and Exit 5 Connections	Allows for connections currently provided

* Distance between southbound Exit 4 and Exit 5 needs to be evaluated for traffic operations, LOS and safety.

How does Alternative D-2 Compare to the Other Considerations?

Gateway Effect to Airport

- Does not provide opportunity for gateway effect.

Environmental/Agricultural Impacts

- Has potential to impact in excess of 6 acres of agricultural lands.

Commercial, Social and Economic Impacts

Requires acquisition of:

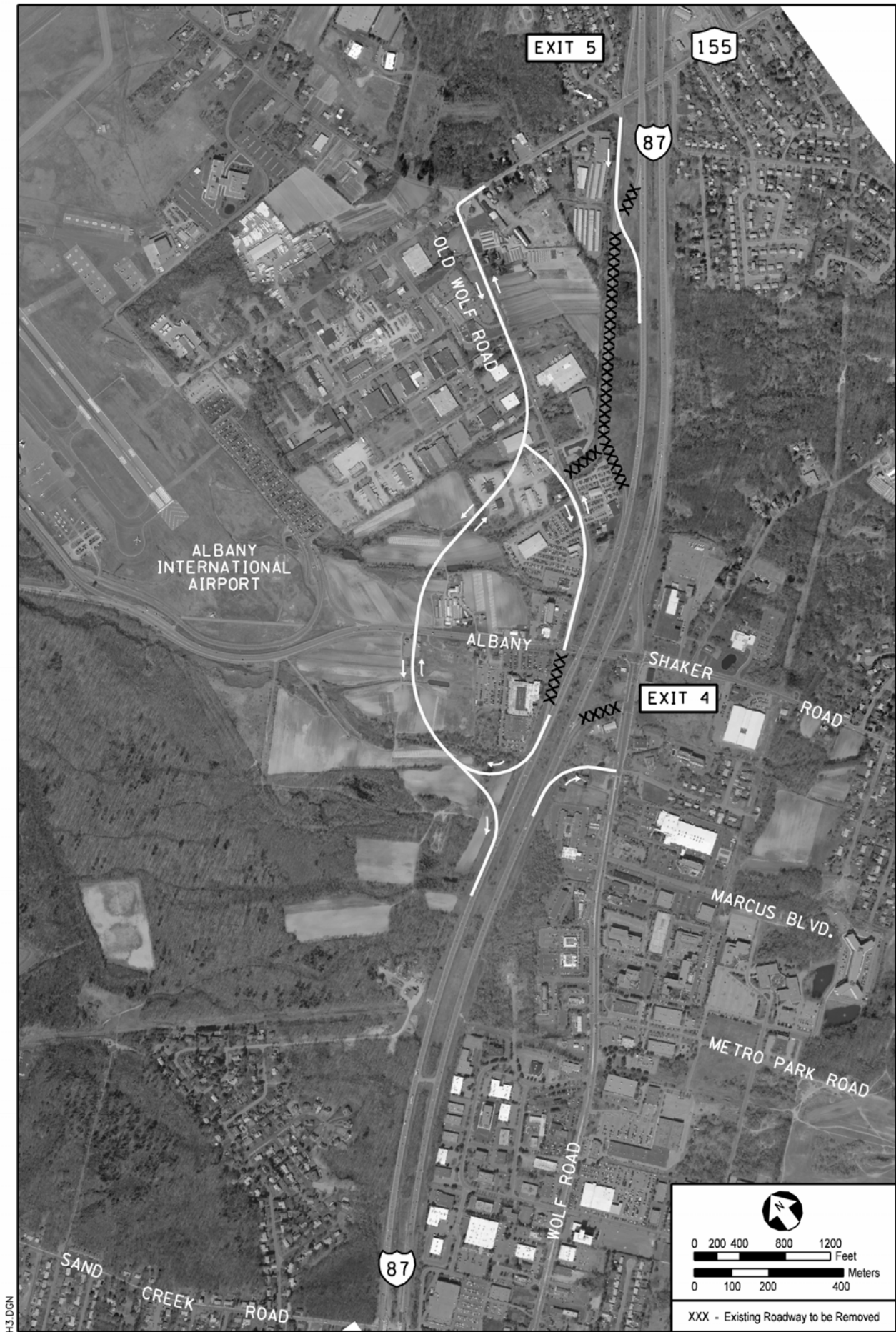
- | | |
|----------------------------|------------------------------|
| • Airport Rapid Park | • Airport Express |
| • Albany Air Cargo | • Gooding Skin System |
| • Excelsior Freight System | • Latham Auto Body Shop Inc. |
| • Bridgestone | |

A Pedestrian-Friendly Environment

- Provides opportunity for pedestrian accommodations.

Approximate Cost

- \$5.5 million (does not include ROW)



Alternative E-1

Alternative E-1 General Description and Key Features:

- Wolf Road and Old Wolf Road are reconnected as a continuous roadway under I-87.
- New Exit 4 links I-87 to and from the Albany International Airport area.
- The connection between I-87 and the Albany International Airport area intersects Wolf Road/Old Wolf Road at-grade.

Traffic Connections:

Provides direct connections ---- I-87 northbound to and from Albany International Airport
 I-87 southbound to and from Albany International Airport
 I-87 northbound to and from Wolf Road
 I-87 southbound to and from Wolf Road

Relocates ----- I-87 Exit 4 northbound entrance ramp

Eliminates ----- I-87 Exit 5 southbound entrance ramp

How does Alternative E-1 Compare to the Project Objectives?

Level 1 Measures of Effectiveness	Evaluation of Alternative E-1
1) Access from I-87 Northbound to the Airport	Access is improved*
2) Access from I-87 Southbound to Wolf Road	Access is improved
3) Exit 4 and Exit 5 Connections	Does not allow for southbound entrance ramp in vicinity of Exit 5

* Distance between northbound Exit 4 and Exit 5 needs to be evaluated for traffic operations, LOS and safety.

How does Alternative E-1 Compare to the Other Considerations?

Gateway Effect to Airport

- Provides a gateway opportunity for I-87 traffic.

Environmental/Agricultural Impacts

- Has potential to impact in excess of 3 acres of agricultural lands.

Commercial, Social and Economic Impacts

Requires acquisition of:

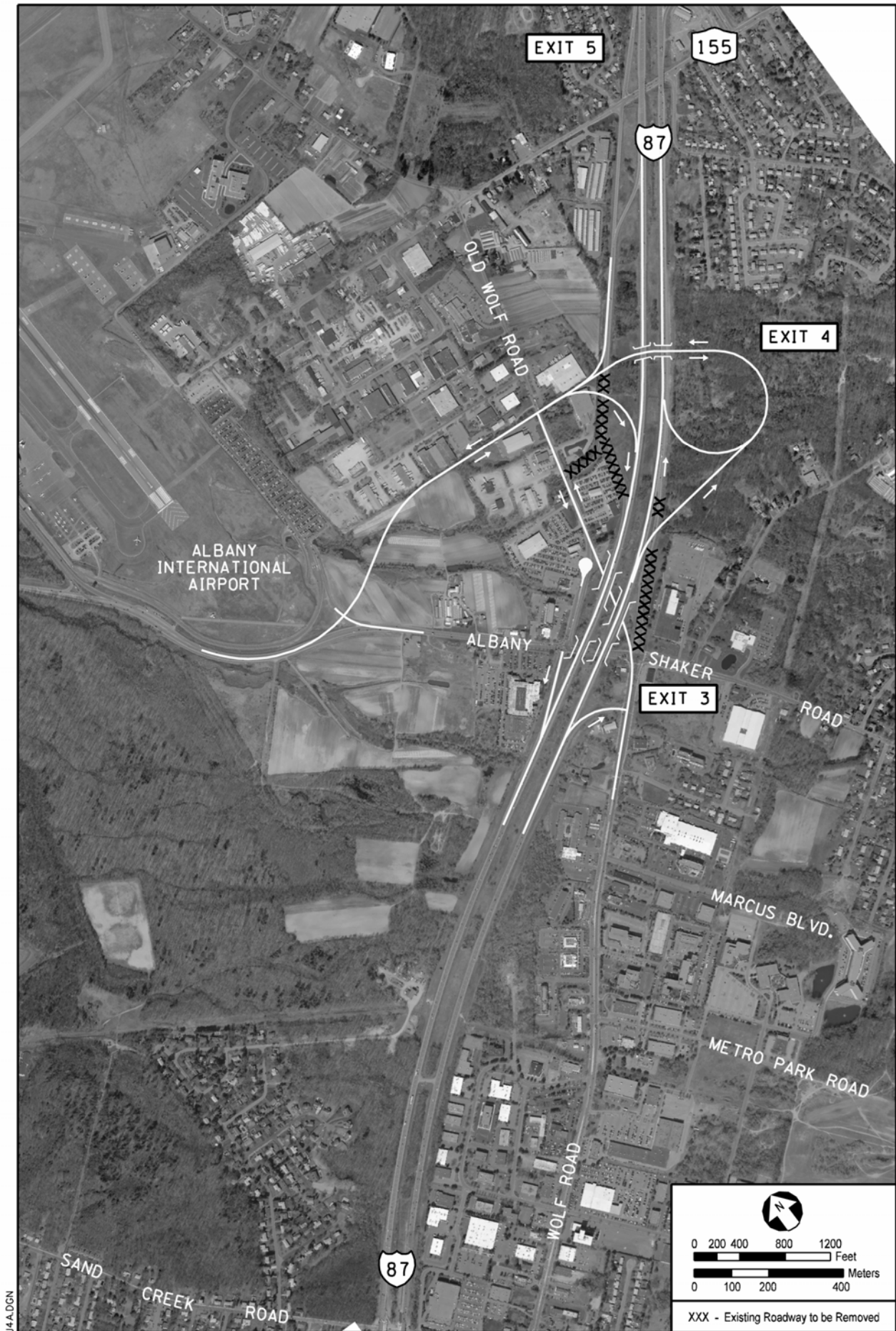
- | | |
|---------------------------------------|-----------------------------------|
| • A-Plus Mini Mart | • MK Rail Corporation |
| • Bridgestone | • Napa Auto Parts |
| • Watkins Motor Lines | • Airborne Express |
| • Colonie Builders Inc. | • Atlantic Detroit Diesel Allison |
| • Two-story house next to Bridgestone | |

A Pedestrian-Friendly Environment

- This alternative concentrates traffic at the Old Wolf Road/Airport Connector and Wolf Road/Albany Shaker Road intersections, which may require pedestrians to cross a large number of travel lanes.

Approximate Cost

- \$27.0 million (does not include ROW)



Alternative E-2

Alternative E-2 General Description and Key Features:

- New Exit 4 links I-87 to and from the Albany International Airport area.
- The connection between I-87 and the Albany International Airport area bridges over Wolf Road/Old Wolf Road.

Traffic Connections:

Provides direct connections ---- I-87 northbound to and from Albany International Airport
 I-87 southbound to and from Albany International Airport
 I-87 northbound to Wolf Road

Relocates ----- I-87 Exit 4 northbound entrance ramp

Eliminates ----- I-87 Exit 5 southbound entrance ramp

How does Alternative E-2 Compare to the Project Objectives?

Level 1 Measures of Effectiveness	Evaluation of Alternative E-2
1) Access from I-87 Northbound to the Airport	Access is improved*
2) Access from I-87 Southbound to Wolf Road	Access is improved
3) Exit 4 and Exit 5 Connections	Does not allow for southbound entrance ramp in vicinity of Exit 5

* Distance between northbound Exit 4 and Exit 5 needs to be evaluated for traffic operations, LOS and safety.

How does Alternative E-2 Compare to the Other Considerations?

Gateway Effect to Airport

- Provides a gateway opportunity for I-87 traffic.

Environmental/Agricultural Impacts

- Has potential to impact in excess of 2 acres of agricultural lands.

Commercial, Social and Economic Impacts

Requires acquisition of:

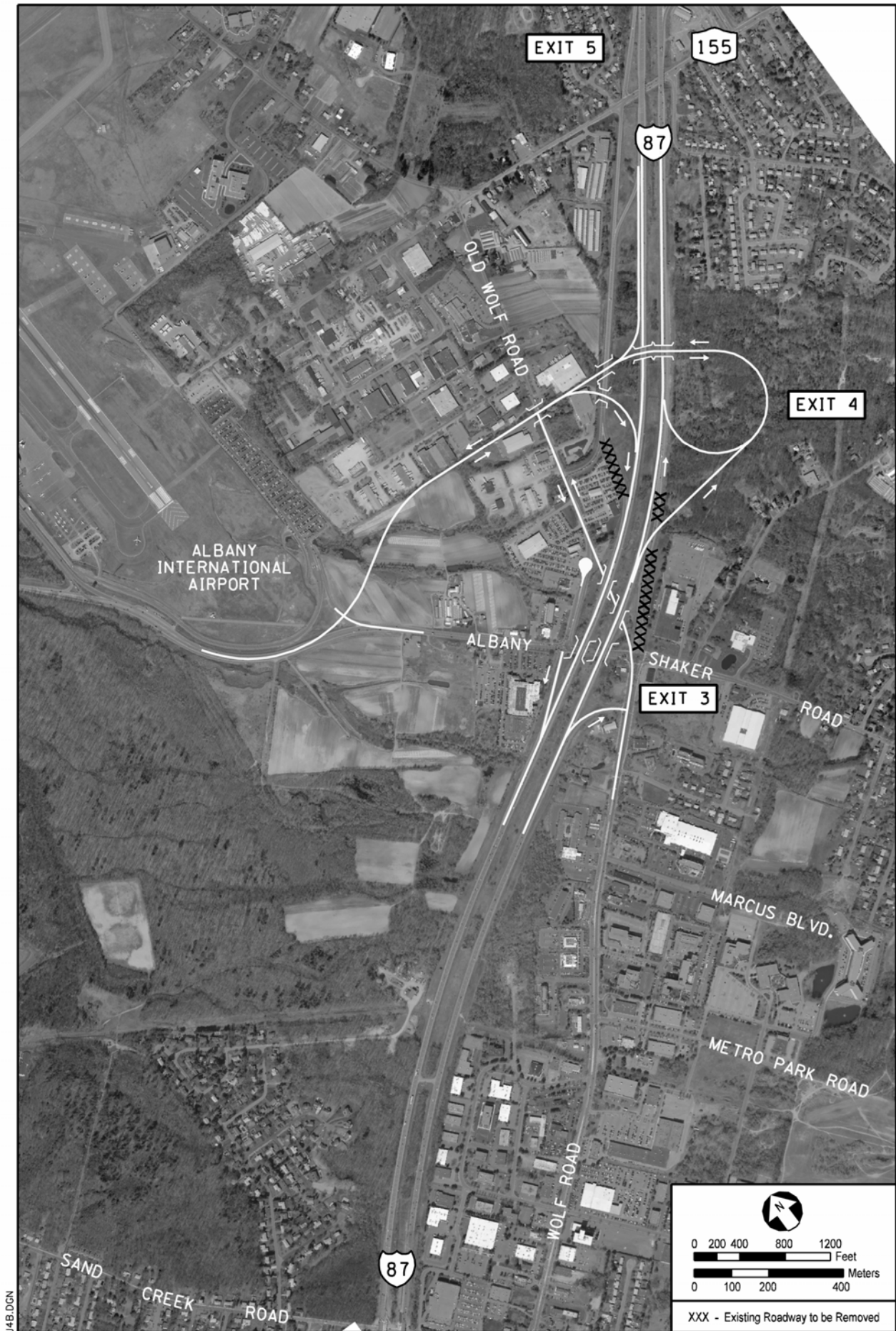
- A-Plus Mini Mart
- Bridgestone
- Watkins Motor Lines
- Colonie Builders Inc.
- Two-story house next to Bridgestone
- Atlantic Detroit Diesel Allison
- MK Rail Corporation
- Napa Auto Parts
- Airborne Express

A Pedestrian-Friendly Environment

- This alternative concentrates traffic at the Wolf Road/Albany Shaker Road intersection, which may require pedestrians to cross a large number of travel lanes.

Approximate Cost

- \$33.0 million (does not include ROW)



Alternative E-3

Alternative E-3 General Description and Key Features:

- New Exit 4 links I-87 to and from the Albany International Airport area.
- The connection between I-87 and the Albany International Airport area bridges over Wolf Road/Old Wolf Road.
- Maintains entrance ramp linking Wolf Road to I-87 northbound.

Traffic Connections:

Provides direct connections ---- I-87 northbound to and from Albany International Airport
 I-87 southbound to and from Albany International Airport
 I-87 northbound to and from Wolf Road

Eliminates ----- I-87 Exit 5 southbound entrance ramp

How does Alternative E-3 Compare to the Project Objectives?

Level 1 Measures of Effectiveness	Evaluation of Alternative E-3
1) Access from I-87 Northbound to the Airport	Access is improved*
2) Access from I-87 Southbound to Wolf Road	Access is improved
3) Exit 4 and Exit 5 Connections	Does not allow for southbound entrance ramp in vicinity of Exit 5

* Distance between northbound Exit 4 and Exit 5 needs to be evaluated for traffic operations, LOS and safety.

How does Alternative E-3 Compare to the Other Considerations?

Gateway Effect to Airport

- Provides a gateway opportunity for I-87 traffic.

Environmental/Agricultural Impacts

- Has potential to impact in excess of 2 acres of agricultural lands.

Commercial, Social and Economic Impacts

Requires acquisition of:

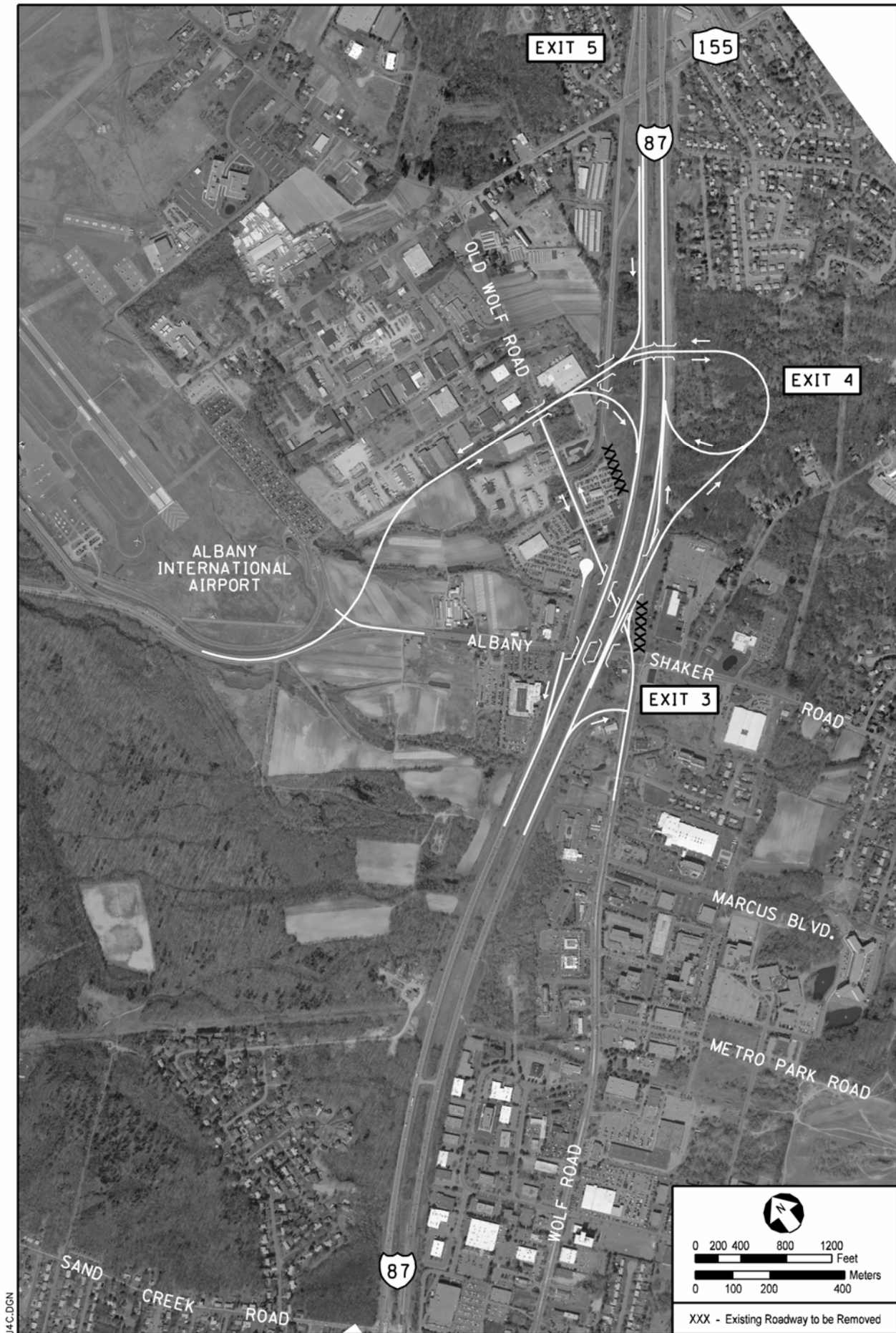
- | | |
|---------------------------------------|-----------------------------------|
| • A-Plus Mini Mart | • MK Rail Corporation |
| • Bridgestone | • Napa Auto Parts |
| • Watkins Motor Lines | • Airborne Express |
| • Colonie Builders Inc. | • Atlantic Detroit Diesel Allison |
| • Two-story house next to Bridgestone | |

A Pedestrian-Friendly Environment

- This alternative concentrates traffic at the Wolf Road/Albany Shaker Road intersection, which may require pedestrians to cross a large number of travel lanes.

Approximate Cost

- \$38.5 million (does not include ROW)



Summary

Access Matrix

Interstate 87 Exit 3 Airport Connector

Town of Colonie

Albany County, New York

P.I.N. 1721.51.121

Movement		Alternative																		
		A-1	A-2	A-3	B-1	B-2	B-3	B-4	B-5	B-6	C-1	C-2	C-3	C-4	D-1	D-2	E-1	E-2	E-3	E-4
I-87 NB to ASR* WB/Albany International Airport I-87 NB to Wolf Rd I-87 NB to ASR EB I-87 NB to Old Wolf Rd	+	++	++	++	++	++	++	++	++	++	++	++	++	+	0	0	+	+	+	++
	-	0/+	+	0/+	0/+	0/+	0/+	0/+	0/+	0/+	0/+	0/+	0/+	-	0	0	0/+	0/+	0/+	0/+
	-	0/+	0/+	0/+	0/+	0/+	0/+	0/+	0/+	0/+	0/+	0/+	0/+	-	0	0	0/+	0/+	0/+	+
	-	0/+	0/+	0/+	0/+	0/+	0/+	0/+	0/+	0/+	0/+	0/+	0/+	+	0	0	++	+	+	+
I-87 SB to ASR WB/Albany International Airport I-87 SB to Wolf Rd I-87 SB to ASR EB I-87 SB to Old Wolf Rd	+	++	++	0/+	0/+	0/+	0/+	0/+	++	++	++	++	++	++	+	0	+	+	+	0/+
	+	0/+	+	0/+	++	++	++	++	0/+	+	++	++	++	+	+	+	++	++	++	++
	0/+	0/+	+	0/+	0/+	0/+	0/+	0/+	0	-	0/+	0/+	0/+	-	0	-	++	0/+	0/+	0/+
	0/+	0/+	0/+	0	0/+	0/+	0/+	0/+	0/+	++	0/+	0/+	0/+	++	0	0	++	0/+	0/+	0/+
Wolf Rd to I-87 SB Wolf Rd to I-87 NB Wolf Rd to ASR WB/Albany International Airport Wolf Rd to ASR EB Wolf Rd to Old Wolf Rd	+	-	-	0/+	+	0/+	0/+	++	0/+	0/+	++	++	++	+	0	0	+	0/+	0/+	++
	+	0/+	+	0/+	0/+	0/+	0/+	0/+	0/+	0/+	+	+	+	0/+	0	0	-	--	0/+	0/+
	+	0/+	+	0/+	0/+	0/+	0/+	0/+	0/+	0/+	-	-	-	0/+	0	0	0/+	-	0/+	0/+
	0/+	0/+	0/+	0/+	0/+	0/+	0/+	0/+	0/+	0/+	0/+	0/+	0/+	0/+	0	0	0/+	0/+	0/+	++
Old Wolf Rd to ASR WB/Albany International Airport Old Wolf Rd to I-87 NB Old Wolf Rd to I-87 SB Old Wolf Rd to ASR EB Old Wolf Rd to Wolf Rd	0/+	0/+	0/+	0/+	0/+	0/+	0/+	0/+	0/+	0/+	-	-	-	0	0	0	+	-	-	0/+
	0/+	0/+	++	0/+	++	0/+	-	-	0/+	-	--	0/+	0/+	-	0	0	++	-	-	0/+
	0/+	0/+	0/+	0/+	0/+	0/+	0/+	0/+	0/+	0/+	0/+	0/+	0/+	0/+	0	0	0/+	0/+	0/+	0/+
	0/+	0/+	0/+	0/+	0/+	0/+	0/+	0/+	0/+	0/+	0/+	0/+	0/+	0/+	0	0	++	++	++	++
Albany International Airport to I-87 NB Albany International Airport to I-87 SB Albany International Airport to Wolf Rd Albany International Airport to ASR Albany International Airport to Old Wolf Rd	+	++	+	0/+	0/+	0/+	0/+	0/+	0/+	0/+	++	++	++	+	0	0	+	+	+	0/+
	+	++	++	0/+	-	0/+	+	+	++	+	++	++	++	++	0	0	+	+	+	++
	+	-	0/+	0/+	0/+	0/+	0/+	0/+	0/+	0/+	0/+	0/+	0/+	0/+	0	0	+	0/+	0/+	0/+
	-	-	0/+	0/+	0/+	0/+	0/+	0/+	0/+	0/+	0/+	0/+	0/+	0/+	0	0	0/+	0/+	0/+	0/+
ASR to I-87 NB ASR to I-87 SB ASR to Wolf Rd ASR to Albany International Airport ASR to Old Wolf Rd	0/+	0/+	0/+	0/+	0/+	0/+	0/+	0/+	0/+	0/+	-	0/+	0/+	0/+	0	0	-	-	0/+	0/+
	-	-	-	0/+	-	0/+	0/+	0/+	0/+	0/+	-	-	-	-	0	0	0/+	0/+	0/+	0/+
	0/+	0/+	0/+	0/+	0/+	0/+	0/+	0/+	0/+	0/+	0/+	0/+	0/+	0/+	0	0	0/+	0/+	0/+	0/+
	0/+	0/+	0/+	0/+	0/+	0/+	0/+	0/+	0/+	0/+	0/+	0/+	0/+	0/+	0	0	-	-	0/+	0/+

++ = NEW DIRECT CONNECTION

+ = IMPROVED ACCESS

0/+ = NO ACCESS CHANGE, BUT REDUCED TRAFFIC

0 = NO ACCESS CHANGE

- = NO ACCESS CHANGE BUT ADDED TRAFFIC; OR ADDED TRAVEL DISTANCE

-- = ACCESS REMOVED

* ASR = ALBANY SHAKER ROAD

Conceptual Alternative Screening Summary

Interstate 87 Exit 3 Airport Connector

Town of Colonie

Albany County, New York

P.I.N. 1721.51.121

Alternative	Does Alternative meet the Level 1 Measures of Effectiveness (MOE)?				Non-Standard Features?	Cost (Millions)	Document Section (1 or 2)	Recommended for Further Study?	Remarks
	MOE L1-1	MOE L1-2	MOE L1-3	MOE L1-4					
A-1	Y	Y	Y	Y	N	\$17.00	1		
A-2	Y	N	Y	Y	Y	\$18.50	2		
A-3	Y	Y	Y	Y	N	\$15.00	1		
B-1	Y	N	Y	Y	N	\$9.50	2		
B-2	Y	Y	Y	Y	N	\$13.00	1		
B-3	Y	Y	Y	Y	N	\$15.50	1		
B-4	Y	Y	Y	Y	N	\$19.50	1		
B-5	Y	Y	Y	Y	N	\$21.50	1		
B-6	Y	N	Y	Y	N	\$16.00	2		
C-1	Y	Y	Y	Y	N	\$13.50	1		
C-2	Y	Y	Y	Y	N	\$28.50	1		
C-3	Y	Y	N	Y	N	\$29.50	2		
C-4	Y	Y	N	N	N	\$20.00	2		
D-1	N	Y	Y	Y	N	\$3.50	2		
D-2	N	Y	Y	Y	N	\$5.50	2		
E-1	Y	Y	N	Y	N	\$27.00	2		
E-2	Y	Y	N	Y	N	\$33.00	2		
E-3	Y	Y	N	Y	N	\$38.50	2		
E-4	Y	Y	Y	Y	N	\$34.00	1		

